

REMARKS/ARGUMENTS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1-23 and 27-30 are presently pending in this case.

In the outstanding Official Action, Claims 21 and 23 were rejected under 35 U.S.C. §101; Claims 1-23, and 27-30 were rejected under 35 U.S.C. §103(a) as unpatentable over Fanning et al. (U.S. Patent No. 6,742,023, hereinafter “Fanning”) in view of Needham et al. (U.S. Patent Application Publication No. 20020194256, hereinafter “Needham”) and Kohonen et al. (“Self Organization of a Massive Document Collection,” hereinafter “Kohonen”).

With regard to the rejection of Claims 21 and 23 under 35 U.S.C. §101, it is respectfully noted that Claim 21 *is* a method claim having two steps: “storing” and “transmitting,” contrary to the assertion in the outstanding Office Action that “They are clearly not a series of steps.”¹ Further, it is respectfully submitted that the correct test for subject matter eligibility is the machine or transformation test described in *In re Bilski*. In the present case, Claim 21 recites a particular machine or apparatus, namely a storage node including an indexer and a client system. Consequently, it is respectfully submitted that Claim 21 (and Claim 23 dependent therefrom) is in compliance with all requirements under 35 U.S.C. §101.

The outstanding Office Action again fails to even mention the opinion of *In re Bilski*, much less explain how the pending claims do not comply with that opinion. If the present rejection is to be maintained, it is respectfully requested that the next office communication identify how the pending claims are not in compliance with *In re Bilski* for the purpose of facilitating the appeals process.

¹See the outstanding Office action at page 2, line 25.

With regard to the rejection of Claims 1, 16, 17, 21, and 22 as unpatentable over Fanning in view of Needham and Kohonen, that rejection is respectfully traversed.

With regard to the rejection of Claim 1 as unpatentable over Fanning in view of Kohonen, that rejection is also respectfully traversed.

Claim 1 recites in part:

a data network;
an information retrieval client system connected to said data network; and
a plurality of information item storage nodes connected to the data network,
wherein *each storage node comprises a store configured to store a plurality of information items and an indexer, the indexer configured to derive data representing an information item, the data representing the information item, when stored, requiring less storage capacity than a corresponding information item, the indexer further configured to send the data representing the information item to the client system via said data network, the indexer configured to maintain a register indicative of whether the data representing the information item has previously been transmitted to the client system, to cause data representing information items which have not previously been transmitted to the client system to be forwarded to the client system, and to update the register in accordance with the data representing information items which were forwarded to the client system, and*
said client system includes a node position generating unit configured to generate a node position in respect of each information item represented by said received data responsive to the data representing the information item received from said indexer of a storage node.

Fanning discloses a peer-to-peer file distribution system that in which files are mirrored as a function of their popularity (referred to as use-sensitive distribution of data in Fanning). This is achieved by making downloaders of a file into new distributors of it, so that frequently downloaded files generate many distributors or so-called mirrors.²

Thus, it is respectfully submitted that the specific aims of Fanning are not aligned with those of the invention recited in Claim 1, in which smaller representations of larger

²Fanning, column 1, lines 46-59 and column 2 lines 2338.

information items held at a remote storage node are passed from the remote storage node to a client if an index at the storage node indicates that this smaller representation has not yet been sent to the client. The client can then use this smaller representation to indicate a position of the respective information item within an array that is topologically arranged to indicate similar information items at similar positions.

The outstanding Office Action cited column 5, lines 13-40 and 42-59 of Fanning as describing “each storage node comprises a store configured to store a plurality of information items and an indexer,” and column 13, lines 6-24 of Fanning as describing “the indexer configured to derive data representing an information item, the data representing the information item, when stored, requiring less storage capacity than a corresponding information item.” The cited passages of Fanning equate the information item to a CD, and the smaller representation to an MP3 or similarly compressed audio file. However it is clear that the CD is *not* stored in the storage node (as the outstanding Office Action notes, Fanning explicitly locates the full data at an *external* source - see column 13, line 20), which is clearly contrary to “each storage node comprises a store configured to store a plurality of information items and an indexer.” Similarly, it is respectfully submitted that the storage node would not include the CD drive, ripper software etc, needed to generate the MP3, which would be required to maintain the assertion of equivalence with “the indexer configured to derive data representing an information item, the data representing the information item, when stored, requiring less storage capacity than a corresponding information item” in the outstanding Office Action. Similar arguments apply to full and compressed video and still images mentioned in the same cited passage.

Thus, it is respectfully submitted that Fanning does not describe the above two quoted features, and in fact Fanning actively teaches away from “each storage node comprises a store configured to store a plurality of information items and an indexer.”

Alternatively, assuming *arguendo* the compressed audio/video is considered to be the information item, Fanning clearly does not then disclose generating a smaller representation of it. In this case, “the indexer configured to derive data representing an information item, the data representing the information item, when stored, requiring less storage capacity than a corresponding information item” is clearly not disclosed by Fanning, and hence also neither is “the indexer further configured to send the data representing the information item to the client system via said data network.”

The fact that either the full information item is *not* stored in the storage node in Fanning or that a smaller representation of the full information item is *not* generated in Fanning (one or the other of these interpretations must hold) means that a system based upon the teachings of Fanning cannot include the structural features of the claimed invention.

The outstanding Office Action conceded that Fanning does not describe “the indexer configured to maintain a register indicative of whether the data representing the information item has previously been transmitted to the client system, to cause data representing information items which have not previously been transmitted to the client system to be forwarded to the client system, and to update the register in accordance with the data representing information items which were forwarded to the client system” and cited Needham as describing these features.

Referring now to the passages of Needham cited by the outstanding Office Action, it is clear that Needham discloses a first user (acting as a server) passing an ‘index’ identifier for an information item to a second user acting as a client. When retrieval of the information item is desired, the second user then searches for it locally and if not found then uses the identifier to request it from the first user’s server.

As such, the first user’s server does *not* maintain any register of whether the file has already been sent to the second user. Indeed it is also noted in Needham that the original first

user may have deleted the file before the second user requests it (the request is broadcast to multiple servers, further undermining the interpretation that any one server records whether the client has the file)³, as asserted the outstanding Office Action.

Thus, it is respectfully submitted that that Needham does not disclose “the indexer configured to maintain a register indicative of whether the data representing the information item has previously been transmitted to the client system.”

By the same argument, we also respectfully assert that Needham does not disclose that the indexer in the storage node updates the register when data items are forwarded to the client

Finally, it is respectfully submitted that Needham does not in fact disclose a register in the server (storage node) and hence such a server cannot know what data has or has not been previously transmitted to a client, and hence cannot cause previously unsent data to now be sent. Accordingly, Needham cannot disclose “the indexer configured ... to update the register in accordance with the data representing information items which were forwarded to the client system.”

Moreover, it is respectfully submitted that there would be no suggestion or motivation to combine Needham with Fanning, as the combination of Needham with Fanning would make Fanning unsuitable for its intended purpose and would require a substantial redesign of Fanning. In this regard, the teachings of Needham are incompatible with those of Fanning with regards to the “data representing information items.” In Fanning, depending upon the interpretation used, either there is no data representing information items or such data is a compressed version of the full information item. In Needham, the only data sent other than the full information item is an identifier of the full information item. As this does not seem compatible with either reading of Fanning, adding the index identifiers from Needham into

³Needham, see paragraph 15.

Fanning would make Fanning unsuitable for its intended purpose and/or would require a substantial redesign of Fanning.

Therefore, it is respectfully submitted that Needham does not remedy any of the deficiencies in Fanning identified previously, and the claimed invention remains both novel and inventive over Fanning and Needham both singly and in combination.

With regard to Kohonen, we firstly note the distinction between “storage nodes” (where “nodes” refers to nodes in a communication network) and the array of nodes to which respective information items may be topologically mapped, which are for example nodes of a self organizing neural network.

It is respectfully submitted that Kohonen does not disclose any of the features listed above, and consequently does not remedy any of the deficiencies in Fanning and Needham identified previously. Consequently, as the proposed combination does not teach or suggest “a storage node,” “an indexer,” and “a node position generating unit” as defined in Claim 1, Claim 1 (and Claims 2-15 dependent therefrom) is patentable over Fanning in view of Needham and Kohonen.

In a similar manner, the “store” of Claim 16, the “node position generating unit” of Claim 17, the “maintaining,” “forwarding,” and “updating” of Claims 20-22 are not believed to be taught or suggested by the proposed combination either. Accordingly, Claims 16-23 are also patentable over Fanning, Needham, and Kohonen.

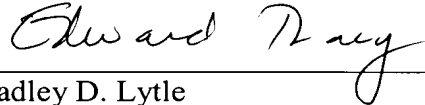
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Accordingly, the pending claims are believed to be in condition for formal allowance.

An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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